# AC/DC WITHSTANDING VOLTAGE/INSULATION RESISTANCE TESTER



GW Instek launches new economical safety testers, the GPT-9600 Series, which offers an affordable solution for supporting routine tests of major items of the safety standards such as IEC, EN, UL, CSA, GB, JIS and other safety regulations.

The GPT-9600 Series is built upon a platform of 100VA AC maximum power output. The GPT-9603 is a 3-in-1 model capable of performing AC withstanding, DC withstanding and insulation resistance tests. The GPT-9612 is capable of performing AC withstanding and insulation resistance tests. The GPT-9602 is capable of performing AC and DC withstanding tests, and GPT-9601 is able to perform AC withstanding test. The GPT-9600 Series is equipped with the high-efficiency PWM amplifier, which is the core of the platform design to impede the influence from the input AC voltage fluctuation and ensure a stable voltage output.

Following a tidy and easy-to-use design concept, the GPT-9600 Series renders users an intuitive operation environment by a simple and clear panel layout, a large LCD display and color LED indicators. The switching power supply, used as a universal input source, accommodates the power systems in most countries in the world. The GPT-9600 series, equipped with the same output voltage function as that of all GW Instek Safety Testers, indicates the expected output voltage before high voltage tests are applied. Furthermore, an AUTO mode, including test sequence selections of withstanding-then-insulation or insulation-then-withstanding, is designed for models carrying insulation Resistance test function to reduce the testing time of dual test items.

Other functions and features of GPT-9600 include: the zero crossing turn-on operation protects DUT from the impact of surge voltage output, the interlock function safeguards users from the hazardous shock of unintentional touch of the voltage output, a remote output on-off terminal in the front panel and a signal I/O port in the rear panel are provided as the means for remote start/stop control of the safety tester.

#### High Efficiency and High Stability Output

The GPT-9600 Series, carrying a high-efficiency PWM amplifier design, generates output source up to 98% efficiency. This greatly reduces the energy loss from heat dissipation and therefore lowers the temperature within the cabinet. The suppression of temperature rise during heavy-duty operation of the tester significantly increases tester's reliability and service lifetime.



#### Friendly User Interface

The 240 x 48 display clearly shows the applied voltage, test parameters, test conditions, measurement value and result on the screen at the same time. The real-time status update on the LCD display accompanied by the multi-colored LED status indicators on the front panel allow operators to have a full control of the test process to perform precession test and avoid unnecessary operation risks at the same time. The status indicator above the high voltage output terminal will automatically flash when an output is in place. In addition, the function keys arranged below the LCD display provide convenient operation that test functions can be easily changed by a single pressing.



Large LCD, High Intensity Indicators and Function Keys

#### Simply AUTO Mode

For models that include the Insulation Resistance test function; there is a simple AUTO mode (W-I or I-W) which allows the operator to run two test functions in sequence. The first test function can either be a withstanding voltage test followed by an insulation resistance test or vice versa, – thus eliminating the need to push the START button twice to run two separate tests.



#### Simply AUTO Mode

#### Support the Universal input voltage

Additionally, the GPT-9600 series provides the universal input voltage range for operating equipment in countries with different electrical power standards. With the GPT-9600 series, the hustle of switching or selecting input voltage range can be left behind. Furthermore, 50Hz or 60Hz can be selected to provide a stable and appropriate test voltage without relying on the electrical environment conditions of input power so as to meet the test requirements.



Universal Input Voltage Range

# **GPT-9600 Series**

### FEATURES

- 100VA AC Test Capacity
- 240 x 48 Ice Blue Dot Matrix LCD
- RMS Current Measurement
- ARC Detection
- Zero Crossing Turn-on Operation
- PWM Switching Amplifier to Enhance the Power Efficiency and Reliable Testing
- Automatically Switching Input Source for World-wide Input Voltage
- Light Design and Easy to Operation



Front



## APPLICATIONS

- Information Tech. Equipment
- Consumer Product
- R.L.C Component
- Other Tests with AC/DC Withstanding Testing Lower than 20mAac or 5mAdc Cut-Off Current



**GPT-9600** Series

| SPECIFICATIONS   |   |  |                          |  |   |       |
|--|---|--|--------------------------|--|---|-------|
| AC WITHSTANDING  | Output-Voltage Range<br>Output-Voltage Resolution<br>Output-Voltage Accuracy<br>Maximum Rated Load<br>Maximum Rated Current<br>Output-Voltage Waveform<br>Output-Voltage Frequency<br>Voltage Regulation<br>Voltmeter Accuracy<br>Current Measurement Range<br>Current Measurement Range<br>Current Best Resolution<br>Current Measurement Accuracy<br>Current Judgment Accuracy<br>Window Comparator Method<br>ARC Detect<br>RAMP (Ramp-Up Time)<br>TIMER (Test Time)<br>GND | 0.10kV~ 5.00kV ac<br>10V<br>$\pm$ (1.5% of setting + 2 counts) with no load<br>100VA(5kV/20mA)<br>20mA (0.5kV< V $\leq$ 5kV); 5mA (0.1kV $\leq$ V $\leq$ 0.5kV)<br>Sine wave<br>50Hz/60Hz selectable<br>$\pm$ (1.5% + 2 counts) [full load $\rightarrow$ no load]<br>$\pm$ (1.5% of rdg + 2 counts)<br>0.01mA-20.0mA<br>0.01mA/0.1mA<br>$\pm$ (2.0% of rdg+10 counts)when HI SET<1.00mA $\pm$ (2.0% of rdg+3counts)when HI SET $\geq$ 1.00mA<br>$\pm$ (3.0% of setting+10 counts)when HI SET $\leq$ 1.00mA ;<br>$\pm$ (3.0% of setting+3counts)when HI SET $\geq$ 1.00mA<br>Yes<br>Yes<br>0.1s fixed<br>OFF, 1s~180s<br>ON |                          |  |   |       |
| DC WITHSTANDING  | Output-Voltage Range<br>Output-Voltage Resolution<br>Output-Voltage Resolution<br>Output-Voltage Accuracy<br>Maximum Rated Load<br>Maximum Rated Current<br>Voltage Regulation<br>Voltmeter Accuracy<br>Current Measurement Range<br>Current Best Resolution<br>Current Measurement Accuracy<br>Current Judgment Accuracy<br>Current Judgment Accuracy<br>Window Comparator Method<br>ARC Detect<br>RAMP (Ramp-Up Time)<br>TIMER (Test Time)<br>GND                           | 0.10kV-6.00kV dc<br>10V<br>$\pm$ (1.5% of setting + 2 counts) with no load<br>25W(5kV/5mA)<br>$6mA(0.5kV < V \le 6kV)$ ; 2mA (0.1kV $\le V \le 0.5kV$ )<br>$\pm$ (1.5% + 2 counts)[full load $\rightarrow$ no load]<br>$\pm$ (1.5% of rdg + 2 counts)<br>0.01mA-6.00mA<br>0.01mA<br>$\pm$ (2.0% of rdg+10 counts)when HI SET<1.00mA $\pm$ (2.0% of rdg+3counts)when HI SET $\ge$ 1.00mA<br>$\pm$ (3.0% of setting+10 counts)when HI SET<1.00mA;<br>$\pm$ (3.0% of setting+3counts)when HI SET<1.00mA ;<br>$\pm$ (3.0% of setting+3counts)when HI SET $\ge$ 1.00mA<br>Yes<br>Yes<br>0.1s fixed<br>OFF, 1s~180s<br>ON        |                          |  |   |       |
| INSULATION RESISTANCE  | Output Voltage<br>Output-Voltage Accuracy<br>Resistance Measurement Range   | 50V, 100V, 250V, 500V, 1000V dc $\pm$ (3.0% of setting +1 count)[no load] 1M $\Omega \sim$ 2000M $\Omega$  |                          |  |   |       |
|  | Test Voltage M  |  | Measurable Range         |  | Accuracy  |       |
|  | 50V/100V/250V   | 1~50MΩ   |                          |  | ±(5% of rdg + 2MΩ)  |       |
|  |   | 51 ~ 2000MΩ  |                          |  | $\pm(10\% \text{ of } rdg + 2M\Omega)$  |       |
|  | 500V/1000V  | 1 ~ 500MΩ<br>501 ~ 2000MΩ  |                          |  | $\pm (5\% \text{ of } rdg + 2M\Omega)$<br>$\pm (10\% \text{ of } rdg + 2M\Omega)$                             |       |
|  | Window Comparator Method<br>Output Impedance<br>RAMP (Ramp-Up Time)<br>TIMER (Test Time)<br>GND   | Yes<br>600kΩ<br>0.1s fixed<br>OFF, 1s~180s<br>OFF (fixed)  | kΩ<br>fixed<br>; 1s~180s |  |   |       |
| TEST MODE *  | Single<br>Auto  | ACW, DCW, IR<br>AC-IR, IR-AC, DC-IR, IR-DC   |                          |  |   |       |
| INTERFACE  | Remote Terminal (Front)<br>Signal I/O   | Standard<br>Standard   |                          |  |   |       |
| DISPLAY  |   | 240 x 48 Ice Blue Dot matrix LCD   |                          |  |   |       |
| POWER SOURCE   |   | AC 100V~120V/220V~240V±10% , 50/60Hz   |                          |  |   |       |
| POWER COMSUMPTION  |   | 400VA Max.   |                          |  |   |       |
| DIMENSIONS & WEIGHT  |   | 330(W)x148(H)x385(D)mm<br>Approx. 9kg max.   |                          |  |   |       |
| * The available "Test Mode" depends on selected model  |   |  |                          | Spe  | cifications subject to change without notice. PT-9600   | GD3DH |
| ORDERING INFORMATION   |   |  |                          |  | ASSESSORIES   |       |
| <b>GPT-9603</b> AC 100VA AC/DC Withstanding Voltage/Insulation Resistance Tester<br><b>GPT-9612</b> AC 100VA AC Withstanding Voltage/Insulation Resistance Tester<br><b>GPT-9602</b> AC 100VA AC/DC Withstanding Voltage Tester<br><b>GPT-9601</b> AC 100VA AC Withstanding Voltage Tester |   |  |                          | GHT-113<br>GHT-117/0<br>GHT-205<br>GRA-417 | High Voltage Test Pistol<br>GHT-117(EU) High Voltage Adapter Box<br>High Voltage Test Probe<br>Rack Mount Kit |       |
| ACCESSORIES  |   |  |                          |  |   |       |
| Quick Start Guide x 1, Power cord x 1, CD x 1 (complete user manual),  |   |  |                          |  |   |       |

Interlock Key x 1, Remote terminal male plug x 1, Test lead GHT-114 x 1

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